# Discovery Report

FEMA Region X

Payette Watershed, HUC 17050122, Idaho

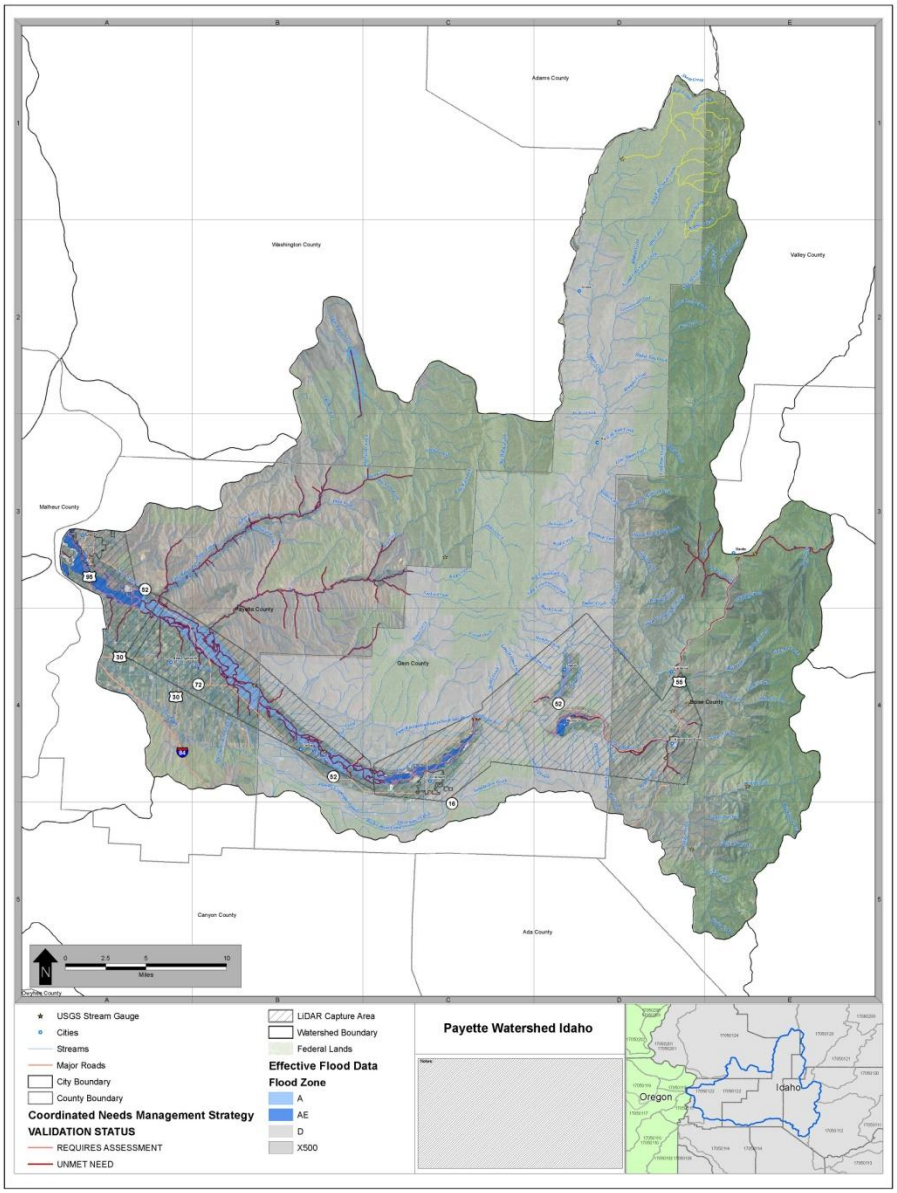
FEMA

Prepared by STARR

# I. Watershed Description

The Payette Watershed is located in southwestern Idaho, where the 62-mile Payette River enters the Snake River at the Idaho/Oregon border. The principal tributaries to the Payette River are the North Fork Payette River and South Fork Payette River. The headwaters originate in the Sawtooth and Salmon River mountains. Primarily comprised of Gem County, a significant portion of Payette County is in the Payette Watershed, along with small areas of Washington, Valley, and Boise Counties. In addition to the noted counties, the incorporated communities of Horseshoe Bend, Emmett, and Payette are also participating in the National Flood Insurance Program (NFIP).

***Map 1: Image of Payette Watershed Project Area Map***



# II. Project Description and Methodology

Discovery is the process of data collection, including information exchange between all governmental levels of stakeholders, spatial data presentation, and cooperative discussion with stakeholders to better understand the watershed, decide whether a flood risk project is appropriate, and if so, to collaborate on the project planning in detail. At this time, Discovery processes and requirements are still being defined; however, draft guidance is available from the draft *Appendix I – Discovery (fall 2010)*, and the draft *Meetings Guidancefor FEMA Personnel (October 2010)*. In addition, there are several draft tools and templates at various stages of completion that were used to support the effort.

Region X initiated an extensive Discovery project in October 2010, with the Discovery of 24 watersheds/project areas in Idaho, Oregon, Washington, and Alaska, involving almost 200 communities. Essentially a pilot project for the Discovery process itself, RX Discovery involved data collection, community interviews, a meeting with stakeholders in the watershed, and development of recommendations based on an analysis of data and information gathered throughout the process.

The Region X Discovery data collection entailed a massive collection of tabular and spatial data for all communities from Federal and State sources, as well as information collected through interviews with each community. The table on the following pages lists the types of data that the Discovery team collected for the Payette Watershed. The table indicates how the data were used in the project: documented in the Community Fact Sheet, incorporated spatially in the Discovery Geodatabase, or used in other ways.

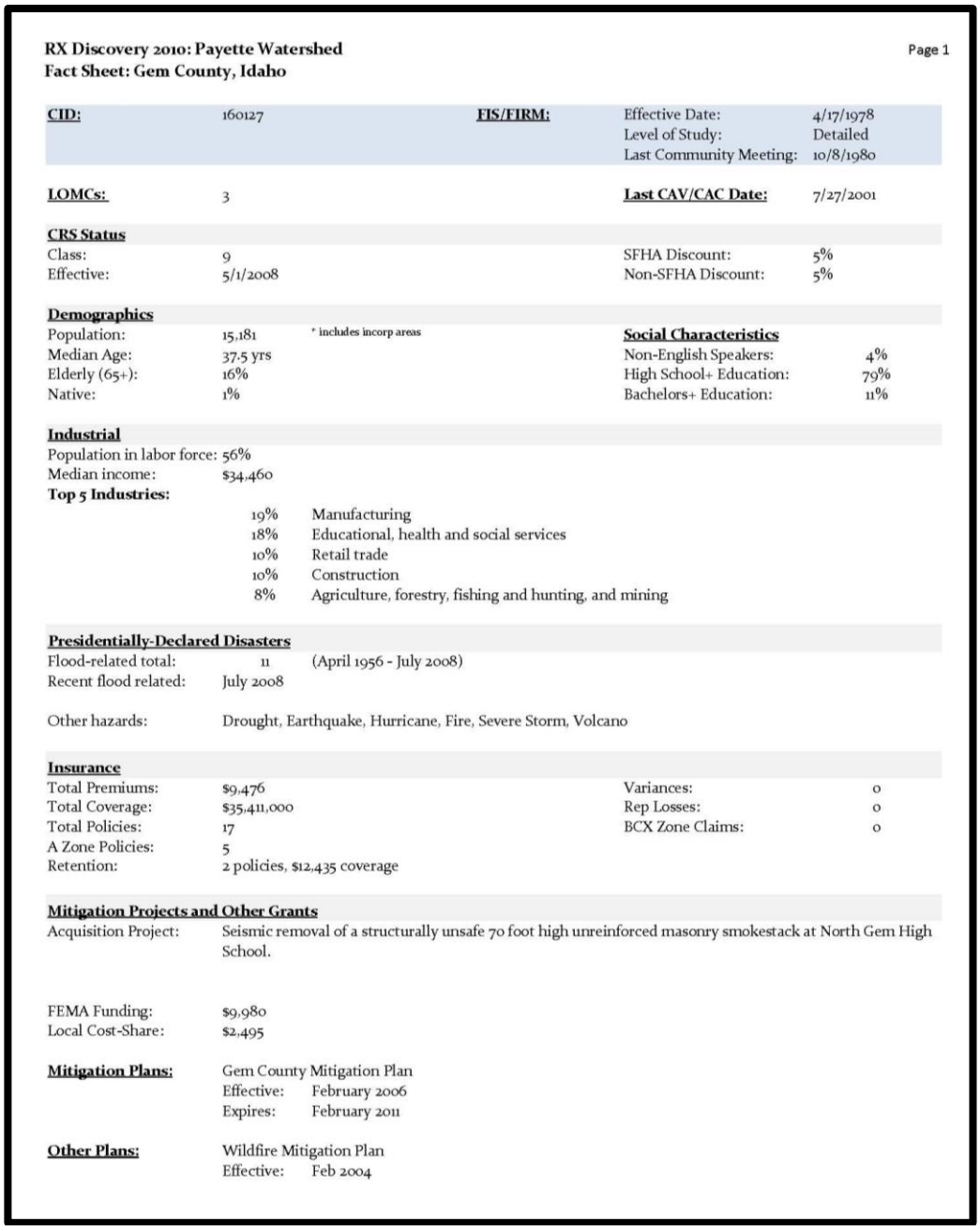
***Table 1: Data Collection for Payette Watershed***

| Data Types | Deliverable | Source |
|---|---|---|
| Community Assistance Visits | Community Fact Sheet | Community Information System (CIS) |
| Community Rating System | Community Fact Sheet | FEMA's "Community Rating System Communities and Their Classes" |
| Demographics, Industry | Community Fact Sheet | U.S. Census Bureau, QuickFacts Table DP |
| Insurance Policies | Community Fact Sheet | Community Information System (CIS) |
| Mitigation Plans Status | Community Fact Sheet | FEMA Regional Office |
| Mitigation Projects | Community Fact Sheet | Data.gov: FEMA Hazard Mitigation Program Summary |
| Repetitive Loss | Community Fact Sheet | Community Information System (CIS) |
| Zone B, C, and X Claims | Community Fact Sheet | Community Information System (CIS) |

| Data Types | Deliverable | Source |
|---|---|---|
| Letter of Map Change (LOMCs) | Community Fact Sheet (known clusters on Discovery Map Geodatabase) | Community Information System (CIS), Community Interview |
| Declared Disasters | Community Fact Sheets | Data.gov: FEMA Disaster Declarations Summary |
| Hazards | Community Fact Sheets | Community Information System (CIS) |
| Boundaries: Community, Idaho | Discovery Map Geodatabase | ESRI |
| Boundaries: County and State | Discovery Map Geodatabase | National Atlas of the United States |
| Boundaries: Watersheds | Discovery Map Geodatabase | U.S. Geologic Survey |
| Effective Floodplains: Modernized SFHAs | Discovery Map Geodatabase | FEMA's Regional Flood Hazard Layer |
| Future or recent highway improvement, bridge, culvert, levee locations | Discovery Map Geodatabase | Developed based on community interview |
| Hydrography: Idaho, Oregon, Washington | Discovery Map Geodatabase | U.S. Geologic Survey's National Hydrography Layer |
| Mitigation Projects: Recent, ongoing, planned, desired FEMA/OFA/local projects | Discovery Map Geodatabase | Developed based on community interview |
| Recent land changes (development, wildfires, landslides, etc.) | Discovery Map Geodatabase | Developed based on community interview |
| Recently developed or planned high growth areas | Discovery Map Geodatabase | Developed based on community interview |
| Stream Gages | Discovery Map Geodatabase | U.S. Geologic Survey |
| Study Needs: FEMA | Discovery Map Geodatabase | Coordinated Needs Management System (CNMS) |
| Study Needs: Recent, ongoing, planned, desired FEMA/OFA/local studies | Discovery Map Geodatabase | Developed based on community interview |
| Topographic Availability | Discovery Map Geodatabase | RX Inventory |
| Transportation: Railroads, Idaho | Discovery Map Geodatabase | Idaho Department of Transportation |
| Transportation: Roads, Idaho | Discovery Map Geodatabase | Idaho State Geospatial Data Clearinghouse |
| Contacts | Excel spreadsheet | Local websites, State/FEMA updates |

The second phase of the RX Discovery effort was to review the collected data with community officials through a phone interview, and to request additional information. The interview included giving community officials information about the Discovery process and a review of the data shown on the Fact Sheets and Interview Reference Maps. Communities were asked to identify "Areas of Concern" which could be addressed during the Discovery Meeting (mapping needs, desired mitigation projects, etc.). The Areas of Concern were added to the Discovery Geodatabase.

***Figure 1. Fact Sheet, page 1, for Gem County, Payette Watershed***



**RX Discovery 2010: Payette Watershed** Page 1
**Fact Sheet: Gem County, Idaho**

| | | | | | |
|---|---|---|---|---|---|
| **CID:** | 160127 | **FIS/FIRM:** | Effective Date: | 4/17/1978 | |
| | | | Level of Study: | Detailed | |
| | | | Last Community Meeting: | 10/8/1980 | |
| **LOMCs:** | 3 | | **Last CAV/CAC Date:** | 7/27/2001 | |
| **CRS Status** | | | | | |
| Class: | 9 | | SFHA Discount: | 5% | |
| Effective: | 5/1/2008 | | Non-SFHA Discount: | 5% | |
| **Demographics** | | | | | |
| Population: | 15,181 | * includes incorp areas | **Social Characteristics** | | |
| Median Age: | 37.5 yrs | | Non-English Speakers: | 4% | |
| Elderly (65+): | 16% | | High School+ Education: | 79% | |
| Native: | 1% | | Bachelors+ Education: | 11% | |

**Industrial**
Population in labor force: 56%
Median income: $34,460
**Top 5 Industries:**

| | |
|---|---|
| 19% | Manufacturing |
| 18% | Educational, health and social services |
| 10% | Retail trade |
| 10% | Construction |
| 8% | Agriculture, forestry, fishing and hunting, and mining |

**Presidentially-Declared Disasters**
Flood-related total: 11 (April 1956 - July 2008)
Recent flood related: July 2008

Other hazards: Drought, Earthquake, Hurricane, Fire, Severe Storm, Volcano

**Insurance**

| | | | |
|---|---|---|---|
| Total Premiums: | $9,476 | Variances: | 0 |
| Total Coverage: | $35,411,000 | Rep Losses: | 0 |
| Total Policies: | 17 | BCX Zone Claims: | 0 |
| A Zone Policies: | 5 | | |
| Retention: | 2 policies, $12,435 coverage | | |

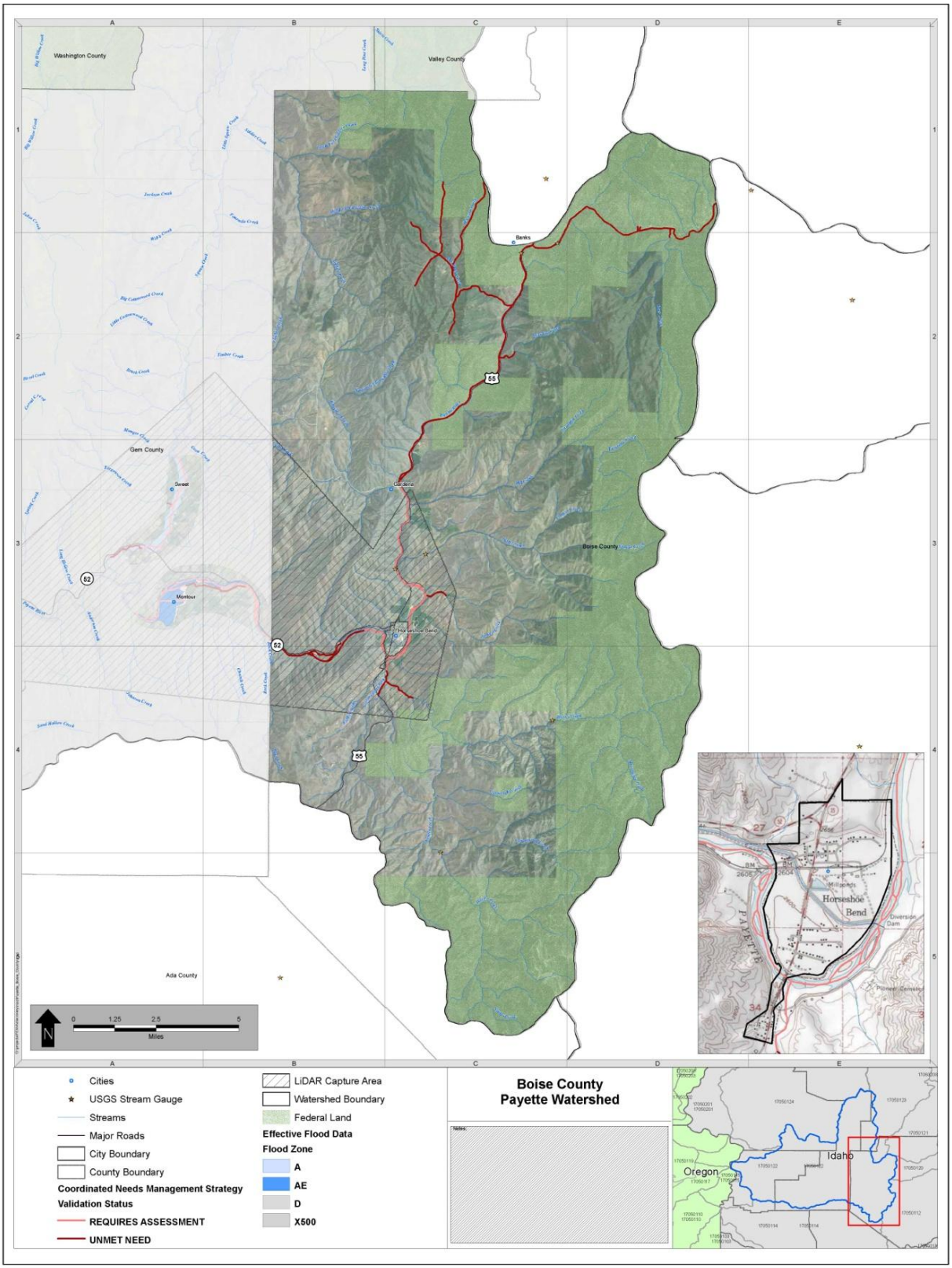
**Mitigation Projects and Other Grants**
Acquisition Project: Seismic removal of a structurally unsafe 70 foot high unreinforced masonry smokestack at North Gem High School.

FEMA Funding: $9,980
Local Cost-Share: $2,495

**Mitigation Plans:** Gem County Mitigation Plan
Effective: February 2006
Expires: February 2011

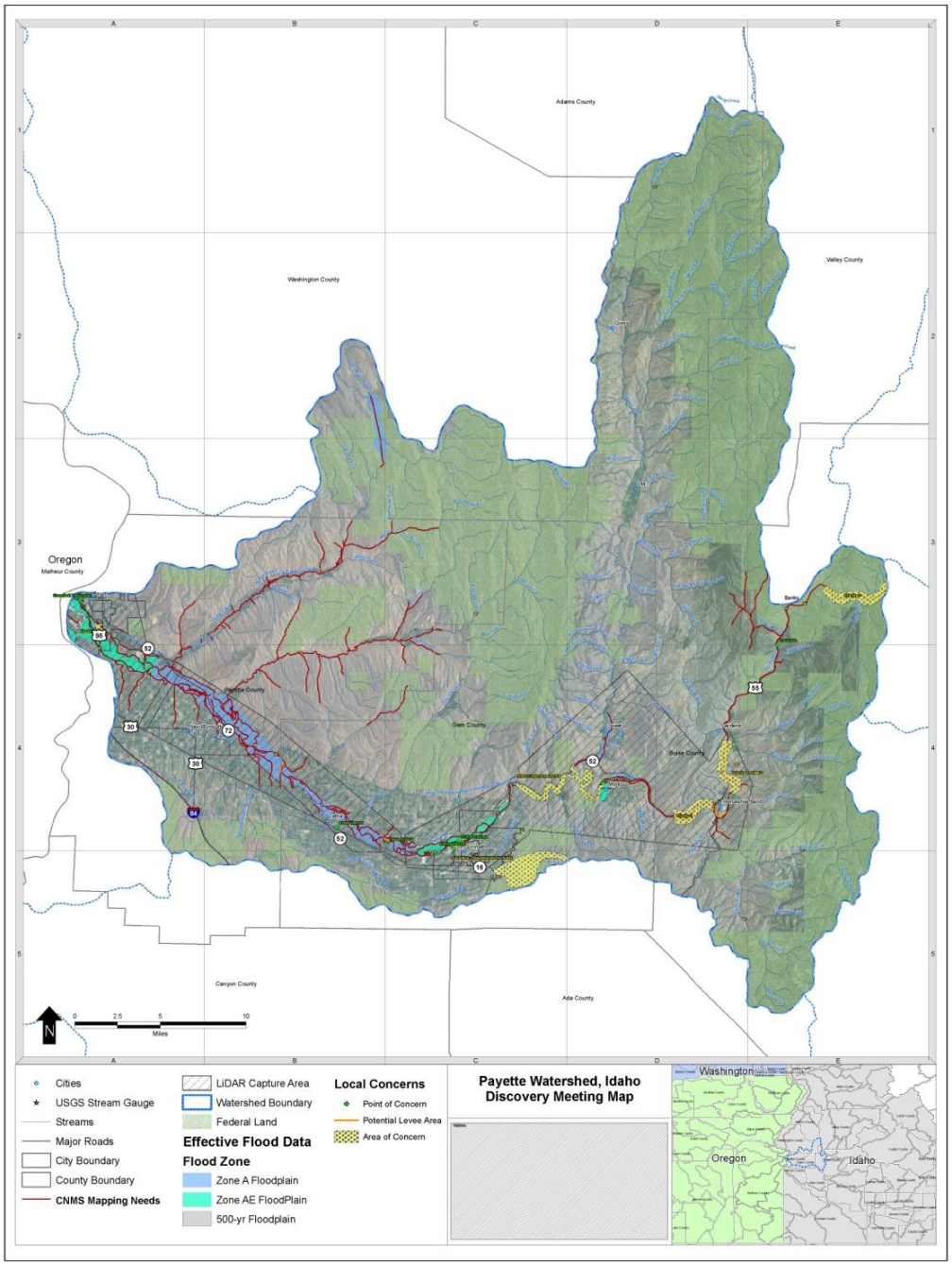
**Other Plans:** Wildfire Mitigation Plan
Effective: Feb 2004

***Map 2. Image of Interview Reference Map for Boise County, Payette Watershed***



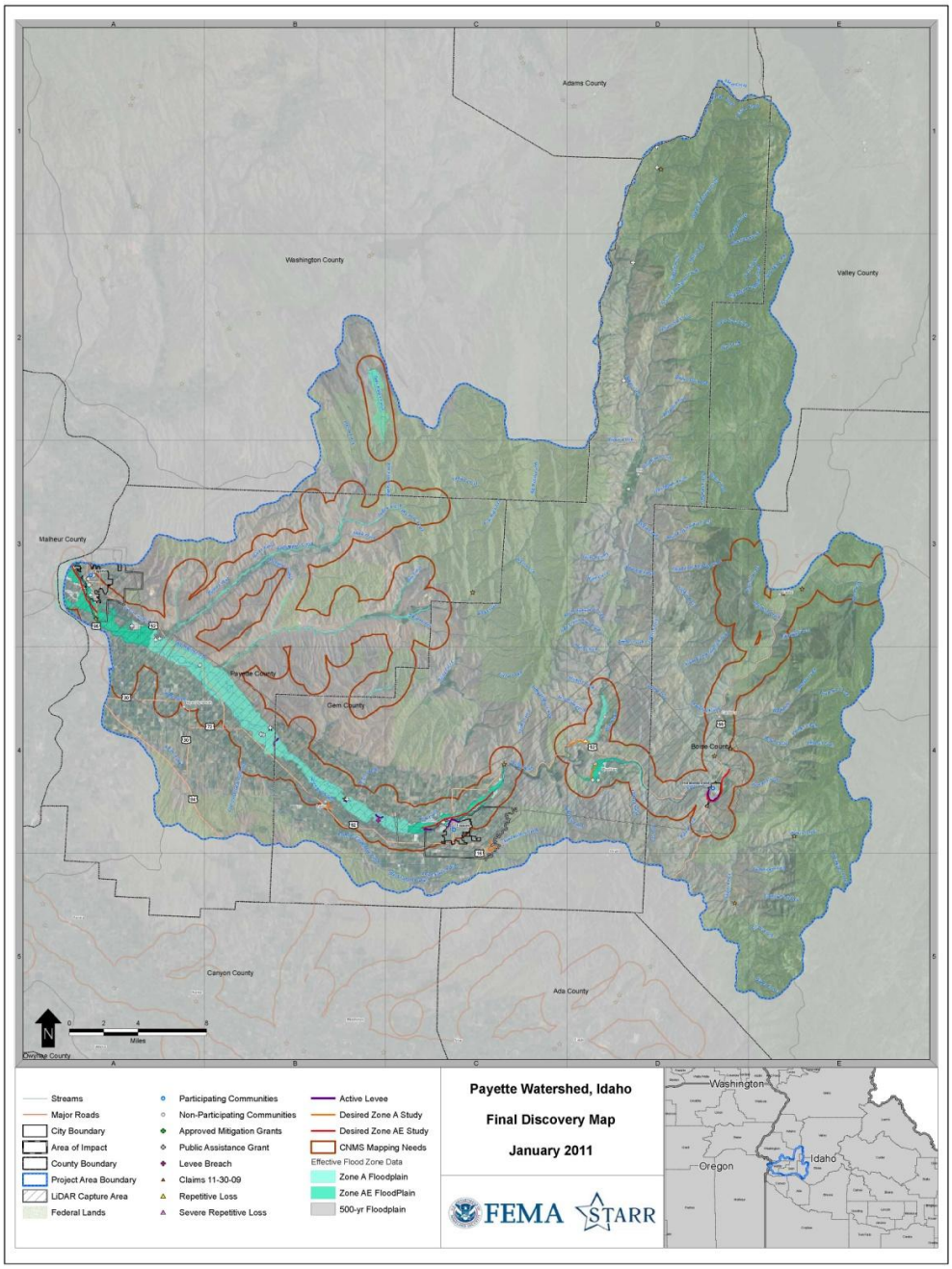
The next step was to hold a watershed-wide Discovery Meeting and facilitate discussion about study needs, mitigation project needs, desired compliance support, and local flood risk awareness efforts. The discussion was stimulated using the Discovery Geodatabase display of relevant data. Attendees, including all affected communities and selected other stakeholders, cooperatively identified solutions for the Areas of Concern shown on the Discovery MeetingMap. Solutions included recommendations (and prioritization) of floodplain studies, mitigation projects, compliance issues, and ideas on how to improve the local flood risk communication programs.

***Map 3. Image of Payette Watershed Discovery Map***



The fourth phase of the Payette Watershed Discovery effort involved an analysis of the data and information collected and discussed at the meeting, and recommendations as to the future relationship and activities between FEMA and the watershed communities. The Final Discovery Map indicates desired study areas and mitigation project locations, and the Discovery Report results pull together the information collected and provides recommendations (see Results section). If a Risk MAP project is to be initiated in this watershed, Discovery will be concluded with the finalization of a project scope and signed Project Charters that indicate that all affected stakeholders agree to the terms of a funded project, including communication and data responsibilities.

***Map 4. Image of Payette Watershed Final Discovery Map***



# III. Risk MAP Needs

The results of the data collection and interviews were thoroughly discussed at the Discovery Meeting. The following sections include issues and situations that exist in Payette Watershed that can be considered Risk MAP Needs, to be addressed with Risk MAP projects.

## i. Floodplain Studies

Payette Watershed communities have not had recent map updates: the most current FIS is from 1988 (Boise County and Horseshoe Bend). This, of course, excludes Washington and Valley Counties; the counties chose not to participate in Discovery for the Payette Watershed, given that the small portion of the counties that are in the watershed are federal lands, and are uninhabited. The Payette River effective data is a combination of both detailed and approximate analysis through the three main counties in the watershed (Payette, Gem, and Boise Counties), with detailed data primarily in or adjacent to the participating communities (Payette, Emmett, and Horseshoe Bend). Based on these dates alone, new studies should be considered.

The CNMS data suggested that a considerable number of flooding sources in the watershed should be updated. No claims were identified in the B, C, or X zones, and the communities did not identify any clusters of LOMA/LOMR-Fs (both of which may indicate a need for study). The communities agreed that they would prefer to have new studies for all of the flooding sources in the watershed. Barring that, they requested new detailed studies for all of the reaches currently studied by detailed methods. Some areas, however, stand out as having the highest need for updated studies. These study areas are reflected on the Final Discovery Map and in the table below.

It should be noted that Gem County has already been funded for a map update. The areas that have already been funded for update are also included in the table below.

As shown on the Final Discovery Map, LiDAR is being collected for the main stem of the Payette River from the confluence with Snake River to just north of Horseshoe Bend. The LiDAR was expected to be flow in late 2010 and would likely be available for a fall 2011 project.

| STAKEHOLDER PRIORITY | FLOODING SOURCE | STUDY LENGTH (miles) | STUDY LIMITS | STUDY TYPE |
|---|---|---|---|---|
| **1** | Payette River (City of Payette) | 3.4 | Hwy 95 west to the confluence with Snake River | Detailed |
| **1** | Payette River (City of Emmett) | 4.8 | Frozen Dog Road to the eastern end of the wastewater treatment plant levee | Detailed |
| **1** | Payette River (City of Horseshoe Bend) | 3.2 | Just north of Jackass Creek south around Horseshoe Bend and to the western city limits | Detailed |

| STAKEHOLDER PRIORITY | FLOODING SOURCE | STUDY LENGTH (miles) | STUDY LIMITS | STUDY TYPE |
|---|---|---|---|---|
| **2** | Sevenmile Slough | 1 | Near the Town of Letha (see Final Discovery Map) | New Approximate |
| **3** | Sand Hollow | 1.3 | Southeast of Emmett (see Final Discovery Map) | New Approximate |
| **FY09 funded** | Bissel Creek | 9.6 | From confluence with Payette River to approximately 1.1 miles downstream of Sucker Creek Road. | New Approximate |
| **FY09 funded** | Haw Creek | 9.5 | From confluence with Payette River to approximately 0.5 mile upstream of Butte Road. | New Approximate |
| **FY09 funded** | Sevenmile Slough | 11.9 | From confluence with Payette River (Approximately 1.8 miles upstream of Gem County / Payette County border) to divergence from Payette River (Approximately 0.1 mile north of Cascade Road and 1 mile east of State Highway 52). | New Approximate |
| **FY09 funded** | Squaw Creek | 4.5 | Same as effective maps. | Incorporated via LOMR |

In addition, there are several levees in the watershed for which the communities will need to look into obtaining documentation to meet 44 CFR 65.10. Specifically, it is suggested that additional coordination with Horseshoe Bend, Emmett, and the City of Payette begin as soon as possible to ensure the communities understand the mapping requirements for levees and prepare the residents for the possibility that the levees will not be shown as providing protection from the base flood. These levees were not included in the USACE National Levee Database or Mid-term Levee Inventory. The communities did not indicate that they had documentation at this time that the levees would meet 65.10 (the State provided an October 1989 Eligibility Inspection Report for a Gem County levee). The City of Payette suggested that they may have an earthen barrier that could be considered a levee, but the location was not provided.

## ii. Mitigation Projects

Mitigation plans in Idaho are prepared by the counties as All-Hazard Plans for all the incorporated and unincorporated communities within the county. In Payette Watershed, the communities indicated that they did not contribute to the county plans. Boise County (and Horseshoe Bend) mitigation plan updates are due in November 2011; Gem County (and

Emmett) and Payette County (and the City of Payette) mitigation plan updates are due in February 2011. It was recommended to the communities that they provide support to the counties in the plan development.

Some mitigation projects were identified by the communities, as seen on the Discovery Meeting Map, including greenbelt restoration along the Payette River in the City of Payette, clean up efforts on a levee breach and bridge repair near Emmett and Montour, and acquisition of property near a landslide north of Horseshoe Bend. None of the communities identified any specific desired mitigation projects during the interviews or at the meetings.

## iii. Compliance

Data collected from CIS indicated that none of the communities in Payette Watershed had any variances to their floodplain management ordinances, so it may be assumed that the communities are regulating to at least the minimum criteria required by FEMA. The most recent CAV/CAC visit was in April 2009 with Boise County, prior to that was a February 2006 visit with Gem County, and prior to that were visits in 2002 with Payette (city and county) and Horseshoe Bend. None of the floodplain administrators requested additional training on their responsibilities; however, more frequent visits may be appropriate to ensure local compliance.

## iv. Communications

In interviews, all communities indicated that they were interested in learning more about Risk MAP's communications support, and were open to a future meeting with FEMA to learn about how they can improve their flood risk communication program. Currently, only Gem County is in the CRS program; they are also the only community that provides educational materials regarding flood risk to their citizens. At the meeting, the group discussed the possibility of communities working together to rotate preparation of materials that could be mailed to residents.

The communities in the Payette Watershed are small, with the largest city being the City of Payette at just over 7,000 residents (2000 Census data). The median age in the watershed is in the late 30's, with around a 13% population over 65 years old, an average of around 5% non-english speakers, and less than 1% Native Americans. An average of around 75% of the population holds a high school diploma, and around 10% have a college degree. As of 2000, just under 60% of residents over age 16 that desired employment were working, with a median income just over $30,000 annually. Residents across the watershed worked primarily in manufacturing; educational, health, and social services; and retail trade. There was nothing outstanding in the demographics data to indicate that special outreach strategies would be necessary for the communities in Payette Watershed. The local officials were all interested in learning more about how to provide flood risk information to residents.

While there were no extremely large senior populations in the watershed, there is a senior center in at least one community. In addition to the standard Risk MAP communications strategies, a small outreach poster on the bulletin board of the senior centers was suggested as a good way to raise flood risk awareness in that demographic.

Horseshoe Bend has a large levee along the south side of the community. As stated previously, the levee was not identified in the USACE's National Levee Database or their Mid-term Levee Inventory; however, the community noted that it currently is shown as providing protection from the base flood. Currently, the community does not have permanent easements so they can access the levee and perform maintenance. They have struggled with property owners to obtain permanent rights to access the levees. FEMA or the State may wish to consider providing support in this area – possibly host a public meeting to educate residents about the risk of living behind levees and the value of maintaining a levee or provide mediation services.

Another area in which the communities in Payette Watershed would benefit from FEMA or State support is with the irrigation ditch headgates. There is currently no system or requirements for the headgates to be closed, or opened, during a flood event; however, an open irrigation ditch could re-route floodwaters to locations far from the flooding source. This is a unique issue in Payette Watershed (and possibly other Idaho watersheds) that warrants additional consideration. One suggestion included documenting a system in the All-Hazard Mitigation plans.

Horseshoe Bend, Emmett, and Payette (and Unincorporated Areas nearby) will need additional outreach and education on levee issues, including PALs and 65.10 requirements. The levees in these communities may not meet requirements for accreditation. In addition to educating local officials about the PAL process, the communities would benefit from a plan to distribute outreach materials to their residents on flood risk behind levees and the grandfathering clause. The local officials stated that many residents will be included in the Special Flood Hazard Area if levees are not accredited.

# IV. Close

Local officials in the communities were interested in the Discovery process and Risk MAP and open to learning more about how they can begin to develop resiliency to flood events. They identified several areas for map updates, and while they did not identify specific mitigation projects, there are a few areas in which they could use additional FEMA support. It is recommended that the guidance document outlining the types of Mitigation Planning Technical Support that can be included in Risk MAP projects be evaluated with communities, once finalized. There are levees in the watershed that may not meet accreditation requirements, so the initiation of levee outreach well before any mapping project begins would be beneficial to the residents, local officials, and FEMA in avoiding confusion or appeals. The friendly local officials in Payette Watershed would benefit from the implementation of Risk MAP projects, and would welcome more FEMA involvement in their floodplain management programs.

# V. Appendix – Payette Discovery Documents

Communications

- Contacts
  - Stakeholders: Names, Titles, Phone, Email, Website
  - Discovery Notification Date
  - Interview Date
  - Meeting Attendance Date
  - Outreach Materials Provided Date
  - Draft Project Charter and Meeting Notes Sent Date
- Notifications/Invitations
  - Discovery Meeting Notification
  - FPA Interview Requests
  - Project Charter and Meeting Notes Distribution

Interview and Meeting Documents

- Interviews (by community)
  - Fact Sheet
  - ***Interview Reference Maps***
  - Interview Notes
  - Locally-Provided Documents
- Meeting
  - Presentation
  - Sign-In Sheet
  - ***Discovery Meeting Map***
  - Outreach Materials Requests
  - Meeting Notes
  - Draft Project Charter

Report

- Report
- ***Project Area Map***
- ***Final Discovery Map***
- Data (tabular)
- Geodatabase (spatial data, provided via CD under separate cover)
- Database Updates